

Xerox Docket No. D/98783

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**PATENT APPLICATION**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Jodi F. ABOUJAOUDE et al.

On Appeal from Group: 2624

Application No.: 09/769,923

Examiner: T. PHAM

Filed: January 25, 2001

Docket No.: 112553

For: IMAGE FORMING SYSTEM FOR FORMING MULTIPLE IMAGES ON A PRINTING  
MEDIUM

**RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the October 11 Notification of Non-Compliant Appeal Brief, Applicant attaches hereto a substitute Brief on Appeal in the above-identified application in which the noted informalities have been remedied.

Because the Brief fee under 37 C.F.R. 41.20((b)(2) was previously paid on June 15, 2006, no further fees are believed to be due. However, in the event of any underpayment or overpayment, please debit or credit our Deposit Account No. 24-0037 as needed in order to effect proper filing of this Brief.

Respectfully submitted,

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Date: October 24, 2006

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For: IMAGE FORMING SYSTEM FOR FORMING MULTIPLE IMAGES ON A  
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SUBSTITUTE BRIEF ON APPEAL

Appeal from Group 2624

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Xerox Docket No. D/98783  
Application No. 09/769,923

**I. REAL PARTY IN INTEREST**

The real party in interest for this appeal and the present application is Xerox Corporation, by way of an Assignment recorded in the U.S. Patent and Trademark Office at Reel 011509, Frame 0044.

**II. STATEMENT OF RELATED APPEALS AND INTERFERENCES**

There are no prior or pending appeals, interferences or judicial proceedings, known to Appellants, Appellants' representative, or the Assignee, that may be related to, or which will directly affect or be directly affected by or have a bearing upon the Board's decision in the pending appeal.

**III. STATUS OF CLAIMS**

Claims 1, 2 and 4-18 are pending.

Claim 3 has been canceled.

Claims 1, 2 and 4-18 stand rejected.

**IV. STATUS OF AMENDMENTS**

The pending claims were last amended in an Amendment filed on May 2, 2005. The pending rejected claims were finally rejected in an Office Action mailed on January 20, 2006.

No further amendments were made to the claims.

**V. SUMMARY OF CLAIMED SUBJECT MATTER**

The claimed subject matter of this application relates to an image forming system having the capability to copy at least a portion of an image and reproduce several renditions or instances of that portion on a single printing medium (page 1, lines 13-15 of the specification).

The device for implementing the capability to copy at least a portion of the image and reproduce several renditions or instances of that portion in a single printing medium include an image multiplier that enables a user to submit an image, scanned or otherwise, and position the image to result in an output image containing repeated multiple copies of the original image on a single printing medium, such as an output document or paper sheet (page 2, line 30 - page 3, line 2 of the specification). The method for copying at least a portion of an image and reproducing several renditions or instances of that portion on a single printing medium includes, for example, automatically scanning a portion of a document, creating input image data relating to the input image excluding surrounding white space and determining whether the input image can fit on output paper the requested of times instructed by the user (page 8, lines 9-14 of the specification).

Independent claim 14 recites an image forming system, comprising an image multiplier for automatically scanning an original image portion of a document and automatically determining a number of times the image portion may be formed on a substrate; an image input stage for receiving image data corresponding to an input image; a control stage for selecting at least an original portion of said input image and replicating only said original portion a predetermined number of times to form an output image; and an image output stage for producing said output image on a printing medium.

Fig. 1 shows an image forming system that includes an image multiplier feature for allowing the user to copy or reproduce a portion of the original input image (page 7, lines



15-17). The image multiplier feature automatically scans an original image portion of a document and automatically determines a number of times the image may be formed on a substrate (page 7, lines 25-31; page 8, lines 9-17; Fig. 2).

As shown in Fig. 2, the image forming system also includes an image input stage for receiving image data corresponding to an input image (page 5, line 29 - page 6, line 16).

The control stage of the image forming system selects at least an original portion of the input image and replicates only the original portion a predetermined number of times to form an output image. As shown in Fig. 2, the controller 14 includes a user interface 18 to allow a user to instruct the system to scan a specific input image 58 on a portion of the input document 56 resulting in input image data that contains the information relating to a specific input image 58. The specific portion of the input document where the input image 58 resides forms the input image data and is the only portion that is reproduced on subsequent output document 60 (page 7, lines 25-29). For example, it is shown in Fig. 4, one possible output document 60 contains an output image 62 that comprises multiple copies of an input image 58 of the input document 56. The original input image 58 replicated three times and printed in succession on the output document 60 forms the output image 62 (page 7, lines 11-15).

Fig. 2 also shows a printer that produces an output image on a printing medium.

Independent claim 1 recites a method of forming an output image in an image forming system and comprising automatically determining a location of an original portion of an input document containing image data; instructing the system to duplicate the original portion of the input document; producing image data corresponding to only the original portion of the input document; forming a duplicate image of the original portion of the input document; and reproducing the duplicate image a selected number of times on a printing medium.

In the method, the system automatically determines a location of an original portion of an input document containing the image data such as described at page 8, lines 9-17 of the

specification. In operation, a user selects the image multiplier feature from the user interface 18 to instruct the system to duplicate the original portion of the input document that produces an image data corresponding to only the original portion of the input document. For example, as shown in Fig. 3, the user interface 18 is used to instruct the system to scan the specific input image 58 on a portion of the input document resulting in image data that contains the information relating to the specific input image 58. A duplicate image of the original portion is then formed and reproduced a selected number of times on print medium (page 7, lines 5-31).

Independent method claim 5 recites a method of forming an output image in an image forming system, comprising: automatically determining a location of an original portion of an input document containing image data; obtaining instructions relating to image formation; obtaining input image data relating to an original portion of an input image and based at least partially on said instructions; and forming said output image comprising only said original portion of the input image replicated one or more times on a single printing medium as directed by said instructions.

In the method, the system automatically determines a location of an original (pg. 8, lines 9-17). A user interface 18 is used to instruct the system to scan specific input image 58 (Fig. 3). Based on these instructions, input image data is obtained (Fig. 3). A duplicate image is then formed and reproduced (replicated) a number of times, selected by the user using interface 18, on a print medium (pg. 7, lines 5-31).

**VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

The following grounds of rejection are presented for review: claims 1, 2 and 4-18 are rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 5,144,452 to Abuyama in view of U.S. Patent No. 5,621,810 to Suzuki et al. (Suzuki).

## VII. ARGUMENT

### A. Claims 1, 2 and 4-18 Are Not Obvious Over The Combination of Abuyama and Suzuki

Neither Abuyama or Suzuki, whether considered alone or in combination, disclose or suggest each and every feature recited in the rejected claims. For example, the combination of references fails to disclose or suggest an image forming system, comprising an image multiplier for automatically scanning an original image portion of a document and automatically determining a number of times the image portion may be formed on a substrate; as recited in apparatus claim 14. Furthermore, the combination of references fails to disclose the corresponding method claims recited in claims 1 and 5.

It is admitted in the Office Action that Abuyama fails to disclose or suggest the image multiplier as recited in rejected claim 14. In an effort to overcome the admitted deficiency, Suzuki is combined with Abuyama for allegedly teaching such an image multiplier.

Suzuki relates to an apparatus for image reading or processing that can precisely identify a particular pattern, such as a pattern on banknotes or securities, and prohibit faithful copying of such banknotes and securities (Abstract of Suzuki). As shown in Fig. 4 of Suzuki, the CPU 417 controls the apparatus in various modes. A window comparator 408 discriminates the input of a signal of a predetermined level designated by the CPU 417 to detect background levels or other identifying marks on a banknote or security (col. 5, lines 33-37).

A watermark detection circuit 410 also serves to detect a watermarked portion of the banknote (col. 5, lines 55 and 56). The structure of the device in Suzuki allows for a precise discrimination of a particular image, such as of a banknote, placed in an arbitrary position to securely prohibit the reproduction of a predetermined image when it is entered (see col. 2, lines 1-32).

The Office Action refers to the CPU 417 of Suzuki as corresponding to the image multiplier and alleges the device is shown in Figs. 11 and 14A and described at col. 8, lines 31-65. However, Fig. 11 is described in the specification of Suzuki as showing the principle of positional detection and Fig. 14A is described as showing a view of principle of pattern matching (see col. 3, lines 6-10). Therefore, neither Figs. 11 or 14A disclose or suggest an image multiplier as recited in the rejected claims, or the CPU 417 alleged to correspond to the image multiplier.

The Office Action refers to col. 8, lines 31-65 for teaching the image multiplier. However, the cited section of Suzuki fails to disclose or suggest an image multiplier for automatically scanning an original image portion of a document and automatically determining a number of times the image portion may be formed on a substrate. Rather, as described in col. 8, lines 31-65, the CPU 417 detects the exact position and angle of a banknote from a scanned bitmap. The four corners of the banknote, as shown in Fig. 11 are detected regardless of the angle of the banknote on the platen when originally scanned. Thus, neither the figures, nor the cited section of Suzuki, discloses or suggests the multiplying features as alleged in the Office Action.

In the operation of the device and method of Suzuki, when a pre-registered pattern, such as a red stamp mark on a banknote, is detected (indicating the possibility of forgery), a step is executed for preventing such forgery. Specifically, a signal FF<sub>H</sub> is sent to the printer unit, thus depositing black toner over the entire surface and disabling proper copying of the document (see col. 9, lines 11-30). Thus, rather than teaching an image multiplier for automatically scanning an original image portion and automatically determining a number of times the image portion may be formed on a substrate, the CPU 417 of Suzuki and the accompanying components seek to prevent copying.

**B. Obviousness**

In making an assessment of differences between the prior art and the claimed subject matter, §103 specifically requires consideration of the claimed invention "as a whole." The "as a whole" instruction prevents evaluation of the invention on part-by-part basis. Without this important requirement, an obviousness assessment might successfully break an invention into its component parts, then find a prior art reference corresponding to each component. This line of reasoning would import hindsight into the obviousness determination by using the invention as a roadmap to find its prior art components. *In re Ruiz v. A.B. Chance Co.*, 357 F.2d 1270, 1275 (Fed. Cir. 2004). The "as a whole" assessment of the invention requires a showing that an artisan of ordinary skill in the art at the time of the invention, confronted by the same problems as the inventor and with no knowledge of the claimed invention, would have selected the various elements from the prior art and combine them in the claimed manner. In other words, §103 requires some suggestion or motivation, before the invention itself to make the new combination, see *In re Rouffet*, 149 F.3d 1350, 1355-56 (Fed. Cir. 1998). If a reference's disclosure relates to the same problem as a claimed invention, that fact supports use of the reference in obviousness rejection. *In re Clay*, 956 F.2d 656, 659 (Fed. Cir. 1992). Applicants submit there is no such suggestion or motivation.

The primary reference of Abuyama relates to an image forming apparatus able to acknowledge to an operator the available number of duplicated images which the apparatus can produce on a given sheet, thereby overcoming the problem being addressed in Abuyama. As discussed above, the secondary reference Suzuki relates to preventing copying of certain images such as those of banknotes and securities. Thus, while Suzuki seeks to prevent copying, Abuyama seeks to acknowledge to a user the number of images that may be formed on a particular sheet. Therefore, there is no suggestion or motivation in either of the

references to make the combination as alleged in the Office Action as they relate to disparate problems, neither of which relates to the problem being addressed in this application. Thus, there is no motivation or suggestion in either of the references to make the combination as alleged in the Office Action.

Furthermore, Suzuki actually teaches away from determining a number of times an image may be formed on a substrate because it teaches how to prevent an image from being copied at all. Thus, there is no suggestion or motivation to combine a method of preventing copying with a method of creating duplicate copies as suggested in the Office Action.

Moreover, to make such a combination would render the device being modified unsatisfactory for its intended purpose. For example, Abuyama relates to acknowledging to an operator the available number of duplicated images which an apparatus can produce on a given sheet. By combining the teachings of Suzuki, i.e., preventing duplication, the modified device of Abuyama would be rendered unsatisfactory for its intended purpose. Therefore, there is no suggestion or motivation to make the combination as proposed in the Office Action.

As stated at MPEP §2141.02, the prior art must be considered as a whole, including portions that teach away from the claimed invention. Thus, merely choosing to select a CPU for its alleged teaching of automatically determining a location of an original portion is improper without consideration of the document as a whole. Also, the fact that a reference can be modified is not sufficient to establish a *prima facie* case of obviousness unless the prior art suggest the desirability of the combination (MPEP §2143.01). As discussed above, there is no such suggestion or motivation to combine the references as proposed. Therefore, the combination of references fails to disclose either the apparatus as recited in independent claim 14 or the related method claims in independent claims 1 and 5. Accordingly,

withdrawal of the rejection of claims 1, 2 and 4-18 under 35 U.S.C. §103(a) is respectfully requested.

**C. Motivation to Combine**

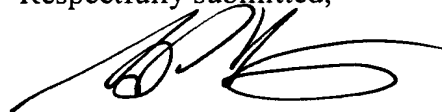
It is argued by the Patent Office that "the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art." This reasoning is alleged in the Office Action to be supported in *In re Fine*, 837 F.2d. 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d. 347, 21 USPQ2d 1941 (Fed. Cir. 1992). However, reliance on *In re Fine* and *In re Jones* is unfounded as in each of those cases, the Examiner and the Board were overturned by the Court which held that there was no support or explanation of the conclusion of obviousness and no suggestion to combine the references to arrive at the claimed invention (see MPEP §2143.01(I)).



**VIII. CONCLUSION**

For all of the reasons discussed above, it is respectfully submitted that the rejections are in error and that claims 1, 2 and 4-18 are in condition for allowance. For all of the above reasons, Appellants respectfully request this Honorable Board to reverse the rejection of claims 1, 2 and 4-18 and allow all pending claims.

Respectfully submitted,



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**APPENDIX A - CLAIMS APPENDIX**

CLAIMS INVOLVED IN THE APPEAL:

1. A method of forming an output image in an image forming system,  
comprising:  
automatically determining a location of an original portion of an input  
document containing image data;  
instructing the system to duplicate the original portion of the input document;  
producing image data corresponding to only the original portion of the input  
document;  
forming a duplicate image of the original portion of the input document; and  
reproducing the duplicate image a selected number of times on a printing  
medium.
2. The method of claim 1, further comprising selecting the number of times said  
input image is replicated to form said output image on said printing medium.
3. (Canceled)
4. The method of claim 1, further comprising receiving user instructions to  
duplicate only a specific portion of an original document.
5. A method of forming an output image in an image forming system,  
comprising:  
automatically determining a location of an original portion of an input  
document containing image data;  
obtaining instructions relating to image formation;  
obtaining input image data relating to an original portion of an input image and  
based at least partially on said instructions; and

forming said output image comprising only said original portion of the input image replicated one or more times on a single printing medium as directed by said instructions.

6. The method according to claim 5, wherein said obtaining instructions include communicating with a user through a user interface and receiving user instructions to duplicate only a specific portion of an original document to form said output image.

7. The method according to claim 5, wherein said obtaining instructions include receiving instructions as to which specific original portion of said input image is to be replicated.

8. The method according to claim 5, wherein said obtaining instructions include receiving instructions as to a number of replications of said original portion of said input image to be replicated.

9. The method according to claim 5, wherein obtaining input image data include scanning a specific portion of an image to be printed.

10. The method according to claim 5, wherein obtaining input image data include receiving a signal from a remote device containing said input image data.

11. The method according to claim 5, wherein forming the output image include printing said original portion of said input image in a repeated fashion up to a predetermined number in concurrence with said instructions.

12. The method according to claim 5, further comprising automatically detecting dimensions of said original portion of said input image and automatically determining a predetermined number of repeated original portions of said input images able to be printed on a single printing medium.

13. The method according to claim 5, further comprising allowing a user to specify an offset for said input image on said printing medium.

14. An image forming system, comprising:
  - an image multiplier for automatically scanning an original image portion of a document and automatically determining a number of times the image portion may be formed on a substrate;
  - an image input stage for receiving image data corresponding to an input image;
  - a control stage for selecting at least an original portion of said input image and replicating only said original portion a predetermined number of times to form an output image; and
  - an image output stage for producing said output image on a printing medium.
15. The system of claim 14, wherein said control stage comprises a user interface for selecting the number of times said original portion of said input image is replicated in said output image on said printing medium.
16. The system of claim 14, wherein said control stage comprises a user interface for providing printing instructions.
17. The system of claim 14, wherein said control stage determines the number of input image replications that can be produced in said output image on said printing medium.
18. The system of claim 14, wherein said control stage can automatically calculate a maximum number of reproductions of said original portion of said input image possible for said single printing medium.

**APPENDIX B - EVIDENCE APPENDIX**

NONE

**APPENDIX C - RELATED PROCEEDINGS APPENDIX**

NONE

